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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,403	01/10/2002	Norman Hay	29752/36543B	9366

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EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT

PAPER NUMBER

3623

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/043,403	HAY ET AL.
	Examiner	Art Unit
	Akiba K Robinson-Boyce	3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 09 May 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 36-42,45,46,48 and 51 is/are pending in the application.

4a) Of the above claim(s) 43,44 and 47 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 36-42,45,46,48 and 51 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 .

4) Interview Summary (PTO-413) Paper No(s) .

5) Notice of Informal Patent Application (PTO-152)

6) Other: .

## **DETAILED ACTION**

### ***Status of Claims***

1. The following is a first action on the merits. Claims 36-42, 45, 46, 48 and 51 are pending in this application and have been examined on the merits. Claims 1-35 and 49-50 were cancelled due to a previous amendment. Claims 43, 44 and 47 were non-elected due to a restriction requirement. Claims 36-42, 45, 46, 48 and 51 are rejected as follows.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 36, 38, 40, 45, 51 and all claims that depend from them are rejected under 35 U.S.C. 101 because the claimed invention is directed to a non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of :

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful art" (i.e., the physical sciences as

opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, claims 36, 38, 40, 45 and 51 are directed to a method for measuring the effect of growing a crop of interest. Claims 36, 38, 40, 45 and 51 recite the steps of “identifying farms…”, “electronically accessing…”, “determining projected profits…”, “selecting at least one of the products”, “determining profits to be earned…”, “summing the profits…”, “accessing a database…”, “estimating a profit…”, “selecting a crop…”, “estimating a quantity…”, “developing a price…”, “estimating an economic effect…”, “selecting a subset of the identified farms…”, determining a subset of aggregated projected inputs…”, “determining a second set of aggregated products…”, “computing a difference…”. These steps represent mere ideas in the abstract because they do not demonstrate any computer means or machine to help process these steps. Since no computer means or machine is demonstrated, these claims and all claims that depend from them are therefore found to be non-statutory subject matter.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 36, 40-42, 45, 46, 48, 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietrich et al (US 5,630,070), and further in view of Reep (US 6,327,569)

As per claim 36, Dietrich et al discloses:

Determining projected profits to each of the farms in the region of interest for growing products different than the crop of interest based at least partially on the at least one current market price, (Col. 7, lines 15-28, [profits for a quality crop]);

Selecting at least one of the products to be replaced by the crop of interest on at least some of the farms in the region of interest, (Col. 36, lines 11-18, [substitute resources]);

Determining profits to be earned by the at least some of the farms for growing the crop of interest, (Col. 35, lines 23-25, [determine whether it is profitable]; and

Summing the profits to be earned by the farms in the region of interest for growing the crop of interest, (Col. 35, lines 27-30, [total profit]).

Dietrich et al fails to disclose the following, however Reep discloses: Identifying farms in the region of interest, (Col. 13, lines 36-39, [location in an agricultural field])

Electronically accessing at least one on-line market to ascertain at least one current market price for at least one product different than the crop of interest, (Col. 8, lines 40-54, [linking to the marketplace via Internet]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Reep and Dietrich et al with the motivation of showing that the evaluation of crops in a harvest environment using

precision farming techniques to the market place can be incorporated into a resource allocation/production planning system since crops in a harvest environment serve as resources and precision farming techniques can be used in production planning in an agricultural environment.

As per claim 40, Dietrich et al discloses:

Determining projected profits to each of the farms in the region of interest for growing products different than the crop of interest based at least partially on the at least one current market price, (Col. 7, lines 15-28, [profits for a quality crop]);

Selecting at least one of the products to be replaced by the crop of interest on at least some of the farms in the region of interest, (Col. 36, lines 11-18, [substitute resources]);

Dietrich et al fails to disclose the following, however Reep discloses:

Identifying farms in the region of interest, (Col. 13, lines 36-39, [location in an agricultural field])

Electronically accessing at least one on-line market to ascertain at least one current market price for at least one product different than the crop of interest, (Col. 8, lines 40-54, [linking to the marketplace via Internet]).

Estimating an economic effect that substituting the crop of interest for the at least one of the products will have on at least one of : (a) a transportation market, (b) a commodity market; (c) demand for storage space; (d) land usage; (e) a price of at least one of the at least one of the products; (f) supply of at least one product; (g)

demand for at least one input to a farm, (Col. 5, line 66-Col. 6, line 9, [supply of Bt-seed corn]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Reep and Dietrich et al with the motivation of showing that the evaluation of crops in a harvest environment using precision farming techniques to the market place can be incorporated into a resource allocation/production planning system since crops in a harvest environment serve as resources and precision farming techniques can be used in production planning in an agricultural environment.

As per claim 41, neither Dietrich et al fails to disclose the following, however Reep discloses:

Taking market action based upon the estimated economic effect, (Abstract, lines 9-18, [transacting a sale through the market]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to take market action based upon the estimated economic effect with the motivation of determining the best time to enter crop value into the marketplace.

As per claim 42, Dietrich et al fails to disclose, however Reep discloses:

Wherein the commodity market is associated with at least one of the at least one of the products to be replaced by the crop of interest, (Abstract, lines 16-18, [where the market is found for particular crop properties]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the commodity market to be associated with at least one of the products to be replaced by the crop of interest with the motivation of keeping the crops in the same family so there won't be drastic changes in market values.

As per claim 45, Dietrich et al discloses:

Determining projected profits to each of the farms in the region of interest for growing products different than the crop of interest based at least partially on the at least one current market price, (Col. 7, lines 15-28, [profits for a quality crop]);

Selecting at least one of the products to be replaced by the crop of interest on at least some of the farms in the region of interest, (Col. 36, lines 11-18, [substitute resources]);

Dietrich et al fails to disclose the following, however Reep discloses:

Identifying farms in the region of interest, (Col. 13, lines 36-39, [location in an agricultural field])

Electronically accessing at least one on-line market to ascertain at least one current market price for at least one product different than the crop of interest, (Col. 8, lines 40-54, [linking to the marketplace via Internet]).

Selecting a subset of the identified farms to grow the crop of interest based on the profit that the identified farms can expect to earn by growing the crop which is replaced by the crop of interest and upon at least one risk associated with the geographic location of the identified farms, (Col. 3, lines 25-30 w/ Col. 4, lines 32-46, [location in the agricultural field to enhance future precision farming]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Reep and Dietrich et al with the motivation of showing that the evaluation of crops in a harvest environment using precision farming techniques to the market place can be incorporated into a resource allocation/production planning system since crops in a harvest environment serve as resources and precision farming techniques can be used in production planning in an agricultural environment.

As per claim 46, Dietrich et al fails to disclose the following, however Reep discloses:

Wherein the at least one risk comprises at least one of weather risk and logistics risk, (Col. 3, lines 25-30, [where the storage in an elevator step represents logistic risks]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for a risk to comprise at least a logistic risk with the motivation of having the ability to determine and avoid conditions that may offset production.

As per claim 48, Dietrich et al fails to disclose the following, however Reep discloses:

Wherein the market action is taken by at least one of an electronic buying agent and an electronic selling agent, (Col. 14, lines 52-61, [computerized crop buying device]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for a risk to have an electronic buying or selling agent with the motivation of making the buying/selling process automated and easier to use.

As per claim 51, Dietrich et al discloses:

Determining a first set of aggregated projected inputs and outputs of the farms in the region of interest for growing products different than the crop of interest, (Col. 8, lines 34-45, [sum of all incremented weights]);

Selecting at least one of the products to be replaced by the crop of interest on at least some of the farms in the region of interest, (Col. 36, lines 11-18, [substitute resources]);

Determining a second set of aggregated projected inputs and outputs of farms in the region of interest assuming the at least some of the farms replace the at least one of the products with the crop of interest, (Col. 9, lines 5-6, [output for the next year]); and

Computing a difference between the first and second sets of aggregated inputs and outputs to estimate at least one effect growing the crop of interest will have on the region of interest, (Col. 9, lines 5-9, [comparison from year to year to determine different grades]);

Dietrich et al fails to disclose the following, however Reep discloses:

Identifying farms in the region of interest, (Col. 13, lines 36-39, [location in an agricultural field]);

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Reep and Dietrich et al with the

motivation of showing that the evaluation of crops in a harvest environment using precision farming techniques to the market place can be incorporated into a resource allocation/production planning system since crops in a harvest environment serve as resources and precision farming techniques can be used in production planning in an agricultural environment.

5. Claims 37, 38, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rawlins (US 5,5,845,229).

As per claim 37, Rawlins discloses:

A database containing current market price data for crops which are different from the crop of interest, (Col. 2, lines 17-19 w/ Col. 3, lines 50-52, [value representing the crop in storage]);

A profit estimator in communication with the database for estimating a profit that the farmer can expect to earn by growing at least one of the crops which are different from the crop of interest, (Col. 7, lines 15-28, [profits associated with a maximum yield plan]);

A product selector cooperating with the profit estimator to select a crop from the at least one of the crops which are different from the crop of interest, (Col. 6, lines 31-36, [identification means]);

A production estimator cooperating with the product selector for estimating a quantity of the crop of interest to be produced by a farmer on acreage associated with the crop selected by the product selector, (Col. 2, lines 12-15, [quantity of the harvested product]);

The following is not specifically disclosed by Rawlins, however it is obvious with Rawlins since Rawlins teaches a pricing engine which correlates with the quality of the crop (See Col. 9, lines 5-13). Since both quality and quantity are measures of the item being produced, it would also make sense to utilize the quantity in connection with the pricing engine:

A pricing engine cooperating with the production estimator to develop a price to be offered the farmer of interest to grow the quantity of the crop of interest estimated by the production estimator based at least in part on the profit that the farmer can expect to earn by growing the crop selected by the product selector,

As per claim 38, Rawlins discloses:

Accessing a database containing current market price data for crops which are different from the crop of interest, (Col. 2, lines 17-19 w/ Col. 3, lines 50-52, [value representing the crop in storage]);

Estimating a profit that the farmer can expect to earn by growing at least one of the crops which are different from the crop of interest, (Col. 7, lines 15-28, [profits associated with a maximum yield plan]);

Selecting a crop from the at least one of the crops which are different for the crop of interest, (Col. 6, lines 31-36, [identification means]);

Estimating a quantity of the crop of interest to be produced by a farmer on acreage associated with the selected crop, (Col. 2, lines 12-15, [quantity of the harvested product]);

The following is not specifically disclosed by Rawlins, however it is obvious with Rawlins since Rawlins teaches a pricing engine which correlates with the quality of the crop (See Col. 9, lines 5-13). Since both quality and quantity are measures of the item being produced, it would also make sense to utilize the quantity in connection with the pricing engine:

Developing a price to be offered the farmer of interest to grow the estimated quantity of the crop of interest based at least in part on the profit that the farmer can expect to earn by growing the selected crop which is different than the crop of interest.

6. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dietrich et al (US 5,630,070), and further in view of Buman et al (US 6,338,040)

As per claim 39, Rawlins fails to disclose the following, however Buman et al discloses:

Identifying a risk factor associated with the farmer of interest, (Col. 3, lines 15-20, [non-Bt corn assets]); and

Adjusting the price to be offered the farmer of interest to grow the quantity of the crop of interest based at least in part upon the risk factor, (Col. 3, lines 20-24, [added to the purchase price of the asset]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to use the risk factor to adjust the price with the motivation of avoiding taking a chance of developing an unsuccessful asset.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

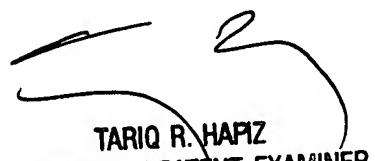
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 703-305-1340. The examiner can normally be reached on Monday-Friday, 8:30 am-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

QAB

A. R. B.  
July 28, 2003

  
TARIQ R. HAPIZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600